

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An information recording medium readable by a playback unit for directing the operation of the playback unit, and on which recording medium there are recorded:

content information;

button information operative for defining a button menu which allows the playback unit to execute an operation as for said content information; and

play list information operative for defining reproduction sequence by the playback unit of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other,

said button information being associated with button image information which is displayed and outputted with a background image,

said play list information including i) item information for specifying each item which constitutes said content information; and ii) sub item information for specifying said

button information as a sub item,

the item information including information indicating a reproduction time of the item,

the sub item information including information indicating a reproduction time of the sub item,

the item information being recorded independently and separately from the sub item information.

2. (canceled)

3. (original) The information recording medium according to claim 1, wherein at least one of the plurality of button pages includes button command information for defining the operation.

4. (original) The information recording medium according to claim 1, wherein at least one of the plurality of button pages includes button control information being associated with at least one button image information which is displayed and outputted as the button menu, and for displaying and outputting the button image information.

5. (previously presented) The information recording medium according to claim 4, wherein the button control information includes at least one of association information which indicates association with the button image information, display

position information which indicates a display position of a button defined by the button image information, and near-by button information which indicates a change in a state of the button caused by the operation.

6. (previously presented) The information recording medium according to claim 1, wherein said button information is displayed, with it superimposed on or in place of one portion of said content information, or is not displayed at all, selectively in accordance with external designation.

7. (original) The information recording medium according to claim 1, wherein said button information is recorded together with said content information, in a content space in which said content information is recorded and which occupies one area of a recording area.

8. (original) The information recording medium according to claim 1, on which there is further recorded background image information for defining a background image on which the button menu is superimposed and displayed.

9. (currently amended) An information recording apparatus, comprising:

a first recording device for recording content

information and button information for defining a button menu which allows an operation as for said content information; and

a second record device for recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other,

said button information being associated with button image information which is displayed and outputted with a background image,

said play list information including i) item information for specifying each item which constitutes said content information; and ii) sub item information for specifying said button information as a sub item,

the item information including information indicating a reproduction time of the item,

the sub item information including information indicating a reproduction time of the sub item,

the item information being recorded independently and separately from the sub item information.

10. (previously presented) The information recording apparatus according to claim 9, wherein said button information is

displayed, with it superimposed on or replaced by one portion of said content information, or is not displayed at all, selectively in accordance with external designation.

11. (currently amended) An information recording method, comprising:

a first recording process of recording content information and button information for defining a button menu which allows an operation as for said content information; and

a second recording process of recording play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction,

said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other,

said button information being associated with button image information which is displayed and outputted with a background image,

said play list information including i) item information for specifying each item which constitutes said content information; and ii) sub item information for specifying said button information as a sub item,

the item information including information indicating a reproduction time of the item,

the sub item information including information indicating a reproduction time of the sub item,  
the item information being recorded independently and separately from the sub item information.

12. (currently amended) An information reproducing apparatus for reproducing an information recording medium on which there are recorded: content information; button information for defining a button menu which allows an operation as for said content information; and play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction, said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other, said button information being associated with button image information which is displayed and outputted with a background image, said play list information including i) item information for specifying each item which constitutes said content information; and ii) sub item information for specifying said button information as a sub item, the item information including information indicating a reproduction time of the item, the sub item information including information indicating a reproduction time of the sub item, the item information being recorded independently and separately from the sub item information,

said information reproducing apparatus comprising:

a reproducing device for reproducing said content information, said menu information and said play list information;

a generating device for generating the button menu on the basis of said button information;

a designating device for designating one button page out of the plurality of button pages; and

a controlling device for controlling said generating device to generate the button menu constructed from the designated one button page.

13. (canceled)

14. (original) The information reproducing apparatus according to claim 12, wherein

    said designating device is a button in which the button command information is defined, and

    said controlling device controls said reproducing device and said generating device, in accordance with the button command information.

15. (previously presented) The information reproducing apparatus according to claim 12, wherein said button information is displayed, with it superimposed on or replaced by one portion of said content information, or is not displayed at all,

selectively in accordance with external designation.

16. (previously presented) The information reproducing apparatus according to claim 12, further comprising a buffer memory for storing the generated button menu.

17. (currently amended) An information reproducing method of reproducing information on an information recording medium on which there are recorded: content information; button information for defining a button menu which allows an operation as for said content information; and play list information for defining reproduction sequence of said content information by a unit of item, which constitutes said content information and which is accessible upon reproduction, said button information including a plurality of button pages each of which can constitute the button menu and whose display can be changed to each other, said button information being associated with button image information which is displayed and outputted with a background image, said play list information including i) item information for specifying each item which constitutes said content information; and ii) sub item information for specifying said button information as a sub item, the item information including information indicating a reproduction time of the item, the sub item information including information indicating a reproduction time of the sub item, the item information being recorded independently and separately from

the sub item information,

    said information reproducing method comprising:

        a reproducing process of reproducing said content information, said menu information and said play list information;

        a generating process of generating the button menu on the basis of said button information;

        a designating process of designating one button page out of the plurality of button pages; and

        a controlling process of controlling said generating process to generate the button menu constructed from the designated one button page.

18-24. (canceled)

25. (previously presented) The information reproducing method according to claim 17, wherein

    in said designating process, a button in which the button command information as defined is used, and

    said controlling process controls said reproducing process and said generating process, in accordance with the button command information.

26. (previously presented) The information reproducing method according to claim 17, wherein said button information is displayed, with it superimposed on or replaced by one portion of

said content information, or is not displayed at all, selectively in accordance with external designation.

27. (previously presented) The information reproducing method according to claim 17, further comprising a buffer process of storing the generated button menu.

28. (new) An information recording medium on which there are recorded for enabling operation of a playback unit;

an object data file for storing a first stream including video information or still picture information and a second stream including a plurality of menu information each of which is displayed in response to a user operation and can select a reproduction point of the first stream or a change of reproduction condition of the first stream in response to the user operation; and

a play list information for storing a plurality of item information each of which specifies the first stream by a unit of an item and a plurality of sub item information each of which specifies the second stream by a unit of a sub item,

the plurality of item information and the plurality of sub item information being recorded in the play list information independently and separately from each other,

the object data file and the play list information being recorded on the information recording medium independently and separately from each other,

one menu information of the plurality of menu information specified by the sub item information being superimposed on a display of the first stream during a reproduction of the first stream specified by the item information,

the first stream and the second stream being recorded such that the reproduction of the video information or the still picture information included in the first stream which is reproduced before the display of the one menu information is continued, by controlling the first stream and the second stream independently and separately, during the one menu information is superimposed.

29. (new) An information recording apparatus for performing a recording operation with respect to the information recording medium according to claim 28,

wherein said information recording apparatus records the first stream and the second stream such that the reproduction of the video information or the still picture information included in the first stream which is reproduced before the display of the one menu information is continued, by controlling

the first stream and the second stream independently and separately, during the one menu information is superimposed.

30. (new) An information reproducing apparatus for performing a recording operation with respect to the information recording medium according to claim 28,

    said information reproducing apparatus comprising:

    a first device for reproducing the first stream;

    a second device for displaying the plurality of menu information; and

    instructing device for instructing the display of the plurality of menu information during the reproduction of the first stream,

    said information reproducing apparatus superimposing one menu information of the plurality of menu information specified by the sub item information on a display of the first stream during a reproduction of the first stream specified by the item information;

    said information reproducing apparatus continuing the reproduction of the video information or the still picture information included in the first stream which is reproduced before the display of the one menu information during the one menu information is superimposed.